

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Use of Spectrum Bands Above 24 GHz For)	GN Docket No. 14-177
Mobile Radio Services)	
)	
Establishing a More Flexible Framework to)	IB Docket No. 15-256
Facilitate Satellite Operations in the 27.5-28.35)	
GHz and 37.5-40 GHz Bands)	
)	
Petition for Rulemaking of the Fixed Wireless)	RM-11664
Communications Coalition to Create Service)	
Rules for the 42-43.5 GHz Band)	
)	
Amendment of Parts 1, 22, 24, 27, 74, 80, 90,)	WT Docket No. 10-112
95, and 101 To Establish Uniform License)	
Renewal, Discontinuance of Operation, and)	
Geographic Partitioning and Spectrum)	
Disaggregation Rules and Policies for Certain)	
Wireless Radio Services)	
)	
Allocation and Designation of Spectrum for)	IB Docket No. 97-95
Fixed-Satellite Services in the 37.5-38.5 GHz,)	
40.5-41.5 GHz and 48.2-50.2 GHz Frequency)	
Bands; Allocation of Spectrum to Upgrade)	
Fixed and Mobile Allocations in the 40.5-42.5)	
GHz Frequency Band; Allocation of Spectrum)	
in the 46.9-47.0 GHz Frequency Band for)	
Wireless Services; and Allocation of Spectrum)	
in the 37.0-38.0 GHz and 40.0-40.5 GHz for)	
Government Operations)	

**OPPOSITION OF STRAIGHT PATH COMMUNICATIONS INC.
TO PETITIONS FOR RECONSIDERATION**

Davidi Jonas, President and CEO
Jerry Pi, Chief Technical Officer

STRAIGHT PATH COMMUNICATIONS INC.
600 Sylvan Ave. Suite 402
Englewood Cliffs, NJ 07632

January 31, 2017

I. INTRODUCTION

Straight Path Communications Inc. (“Straight Path”) hereby submits this opposition to petitions for reconsideration (the “Satellite Petitions”) filed by several entities representing satellite industry interests (the “Satellite Petitioners”)^{1/} in response to the Report and Order (“*Report and Order*”) in the above-captioned proceedings.^{2/} The Commission should reject the Satellite Petitions for three reasons. *First*, the premise of the Satellite Petitions—that the satellite industry was shortchanged by the *Report and Order*—is wrong. The *Report and Order* made significant accommodations to the satellite industry that greatly expanded fixed satellite service (“FSS”) access to spectrum at 37.5-40 GHz (the “37/39 GHz bands”). *Second*, the Satellite Petitioners’ arguments that the satellite industry requires additional millimeter wave spectrum are unconvincing. The industry’s inefficient use—or lack of use—of spectrum that is already allocated for satellite services shows that no such requirement exists. *Finally*, the Satellite Petitions simply rehash arguments that were already fully considered and rejected in the *Report and Order*. The Satellite Petitioners fail to present any new information that demonstrates that the Commission reached the wrong conclusions.

^{1/} In particular, Straight Path opposes the following petitions: Petition for Reconsideration of The Boeing Company (“Boeing Petition”); Petition for Reconsideration of the Satellite Industry Association (“SIA Petition”); Petition for Reconsideration of SES Americom, Inc. and O3b Limited (“SES/O3b Petition”); Joint Petition for Reconsideration of EchoStar Satellite Operating Corporation, Hughes Network Systems, LLC, and Inmarsat, Inc. (“Joint Petition”); and Petition for Partial Reconsideration of ViaSat, Inc. (“ViaSat Petition”) (all filed in GN Docket No. 14-177, *et al.*, on Dec. 14, 2016); *see also* *Petitions for Reconsideration of Action in Rulemaking Proceeding*, Public Notice, Report No. 3065 (Dec. 22, 2016), 81 Fed. Reg. 96,415 (Dec. 30, 2016).

^{2/} *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd. 8014 (2016) (“*Report and Order*”).

II. CONTRARY TO THE SATELLITE PETITIONERS' CLAIMS, THE REPORT AND ORDER ACCOMMODATES FUTURE SATELLITE DEPLOYMENT IN THE 37/39 GHZ BANDS

The Satellite Petitioners argue that the *Report and Order* should be reconsidered because the Commission has not done enough to accommodate satellite use of the 37/39 GHz bands. For example, ViaSat complains that the *Report and Order* “significantly diminished satellite access to spectrum” in the 37/39 GHz bands.^{3/} The Commission should reject the Satellite Petitioners’ claims. As an initial matter, the Satellite Petitioners continue to mischaracterize the intent of this proceeding in order to support their assertions that the Commission erred by not providing the satellite industry sufficient access to millimeter wave band spectrum. This proceeding was initiated to make spectrum available for mobile wireless terrestrial operations.^{4/} While the Commission stated its wish to provide shared access for other services, it never contemplated that such shared access would be at the expense of mobile terrestrial wireless services.^{5/}

Even assuming that the Commission had some obligation to accommodate satellite use of spectrum in this proceeding, the Satellite Petitioners mischaracterize the Commission’s actions. In fact, as the Commission noted, the *Report and Order* adopted rules that “will provide various mechanisms for Fixed-Satellite Service licensees to upgrade the status of their earth stations

^{3/} ViaSat Petition at 6 (claiming that prior to the *Report and Order*, “gateway-type earth stations could be licensed on a co-primary (i.e., interference protected) basis with terrestrial wireless services in the 37.5-40 GHz band segment without any numerical limitations or restrictions on their locations.”).

^{4/} *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Notice of Proposed Rulemaking, 30 FCC Rcd. 11878, para. 1 (2015) (“This development of service rules for mobile use of the millimeter wave (mmW) bands occurs in the context of our efforts to develop a regulatory framework that will help facilitate so-called Fifth Generation (5G) mobile services.”) (“*NPRM*”); *Report and Order* at para. 1 (“Today, we take a significant step towards securing the Nation’s future in the next generational evolution of wireless technology to so-called 5G.”).

^{5/} *See Report and Order* at para. 3 (“Our actions today will establish a framework that will help ensure continued American leadership in wireless broadband by facilitating access to spectrum, maximizing flexibility, and encouraging wireless innovation. At the same time, we adopt rules that will allow these bands to be shared with a variety of other uses, including fixed, satellite, and Federal government uses.”).

without significantly impacting terrestrial operations” in the 37/39 GHz bands.^{6/} Previous rules permitted FSS operators to deploy gateway stations. These market-based solutions enable FSS operators to place earth stations in locations where they obtain the rights to the terrestrial license covering these locations. This option is still available for FSS operators.^{7/} The Commission also established a spectrum-sharing framework for satellite and terrestrial operations that further accommodates FSS operations and facilitates satellite use of the band. In particular, the new rules enable FSS operators to establish “protection zones,” in which satellite services receive protection from transmissions of Upper Microwave Flexible Use Service (“UMFUS”) licensees.^{8/} Therefore, the *Report and Order* did not significantly diminish satellite access to the 37/39 GHz bands—it significantly *expanded* satellite access in the bands over what previously existed.

III. THE SATELLITE PETITIONERS FAIL TO PRESENT CONVINCING EVIDENCE TO JUSTIFY ALLOCATION OF MORE MILLIMETER WAVE SPECTRUM FOR SATELLITE SERVICES

The Satellite Petitioners offer no new information to support their assertion that the Commission should have made additional spectrum available for satellite operations. Instead, they repeat the same claims that more spectrum in the 37/39 GHz bands is needed to support satellite services.^{9/} As noted above, the Commission created a sharing framework that increases

^{6/} *Id.* at para. 4.

^{7/} *Id.* at para. 92.

^{8/} 47 C.F.R. § 25.136(b); *Report and Order* at para. 92.

^{9/} In particular, those petitioners request that the Commission provide them additional access to the 37/39 GHz bands by (i) eliminating the rules limiting deployment of FSS earth stations in the 37/39 GHz bands near major event venues, highways, railroads, and other specific locations; (ii) allowing the exclusion zones from all satellite earth stations operating in each spectrum band to not exceed 0.1 percent of the U.S. population (instead of the 0.1% of the PEA in which a station is located); and (iii) eliminating the rule limiting FSS operators to three earth stations operating in the 37/39 GHz bands in any given PEA. *See, e.g.*, Joint Petition at 2; ViaSat Petition at 6-7; Boeing Petition at 23-25; *see also* 47 C.F.R. § 25.136(c)(1)-(c)(3). Boeing also states that it has designed an NGSO satellite system that “will need access to a full five gigahertz of downlink spectrum, including full access to the 40.0-42.0 GHz band, shared access to the 37/39 GHz band, and access to the 42 GHz band.” Boeing Petition at 22.

FSS access to millimeter wave spectrum. But there was little reason for the Commission to even take these steps. The Commission has already allocated far more spectrum to the satellite industry than it has reserved for mobile use. It should not compromise the primary purpose of this proceeding—to develop a regulatory framework that will help facilitate 5G mobile services^{10/}—to reward the opportunistic behavior of few satellite industry participants purely based on hypothetical proposals that have shown no support of investment, development, and deployment efforts.

The Satellite Petitioners' requests for expanded access to this spectrum is in stark contrast with the lack of development and investment in these bands by the satellite industry, and the abundant spectrum that has been lying fallow that is already available for the satellite industry's use. Indeed, when the Commission issued the *NPRM* in this proceeding in October 2015, it recognized that there were no non-federal FSS authorizations or pending applications in the 39 GHz band at that time.^{11/} The Commission also emphasized that its longstanding soft-segmentation plan favors terrestrial use of the 37.5-40 GHz band and FSS use of the 40-42 GHz band.^{12/} But in the 40-42 GHz band—where satellite use is permitted on an unencumbered basis, and terrestrial use is limited—there have been no satellite operations for over a decade. As Straight Path noted earlier in this proceeding, the 40-42 GHz band is a good example why expansion of FSS rights in the 39 GHz band will likely not generate satellite industry investment, although it will certainly hurt mobile wireless terrestrial 5G deployment.^{13/}

^{10/} See *NPRM* at para. 1.

^{11/} See *id.* at para. 38.

^{12/} See *id.* at paras. 38, 49, 125.

^{13/} See Letter from Davidi Jonas, President and CEO, Straight Path Communications Inc. to Marlene H. Dortch, Secretary, FCC, in GN Docket No. 14-177 (filed June 6, 2016).

It is no surprise that the satellite industry has failed to use this spectrum to provide broadband services to date. Satellite is an extremely inefficient vehicle to provide broadband services as compared to terrestrial mobile broadband.^{14/} Despite the incredible amount of spectrum allocated for FSS, satellite serves less than two million subscribers in the United States.^{15/} Wireless terrestrial service, on the other hand, provides more than 375 million mobile broadband connections throughout the country.^{16/} Straight Path reiterates that while the Commission should strive to accommodate the spectrum needs of both terrestrial and satellite broadband services, it must critically evaluate how efficiently each service utilizes its spectrum resources. The Commission must reject requests to use precious spectrum resources to meet those needs in an inefficient manner.

IV. THE SATELLITE PETITIONS REPEAT ARGUMENTS THAT THE COMMISSION FULLY CONSIDERED AND REJECTED IN THE REPORT AND ORDER

The Commission issued the *Report and Order* following a lengthy and deliberate process in which it received and considered significant input from diverse commenters representing a wide variety of interests. The rules it adopted were the result of extensive study and thorough discussion. The Satellite Petitioners' proposals are nothing more than a rehash of previous recommendations made by these proponents throughout this proceeding.^{17/} The Satellite Petitions fail to provide any new information suggesting that the Commission erred in its

^{14/} See Comments of Straight Path Communications Inc., GN Docket No. 14-177, *et al.*, at 27-28 (filed Jan. 27, 2016).

^{15/} See Comments of the Satellite Industry Association, GN Docket No. 14-177, *et al.*, at 2 (filed Jan. 28, 2016).

^{16/} See *id.*

^{17/} See, e.g., Joint Petition at 2 (proposing revisions to Section 25.136 to eliminate restrictions on deployment of FSS earth stations in the 37/39 GHz bands); Boeing Petition at 7 (proposing to lower the EIRP limit from 75 dBm to 62 dBm for UMFUS base stations), 12 (proposing adoption of specific beamforming and power control requirements), and 20 (proposing that the Commission prohibit the use of omni-directional antennas in the 28 GHz and 37/39 GHz bands).

conclusions. A petition for reconsideration of a final order in a rulemaking proceeding may be dismissed if it relies on facts or arguments that have been fully considered and rejected by the Commission within the same proceeding.^{18/} Here, the Commission has already fully considered and rejected each of the Satellite Petitioners' requests.^{19/} Accordingly, the Satellite Petitions should be denied.

^{18/} See 47 C.F.R. § 1.429(l)(3); see also *Ensuring Continuity of 911 Communications*, Order on Reconsideration, 31 FCC Rcd. 10131, para. 5 (2016) ("It is by now well settled that the Commission will not consider a petition for reconsideration that merely repeats arguments that the Commission has previously rejected."); *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Order on Reconsideration, 29 FCC Rcd. 7515, para. 8 (WTB 2014) (rejecting petitioner's argument that "was specifically considered and rejected in the *Data Roaming Order*, and in any event also fails to identify any material error, omission, or reason warranting reconsideration.").

^{19/} See *Report and Order* at paras. 90-93 (considering EchoStar's comments on FSS use of the 37.5-40 GHz band and establishing conditions on deployment of gateway earth stations in the 39 GHz band), 277 (concluding that "Boeing's claim that the 75 dBm limit is inconsistent with the operational range of 5G applications is contradicted by the simulation results that show the benefits of increasing the maximum power beyond 62 dBm and the consensus among equipment manufacturers that 75 dBm is a reasonable power limit for UMFUS base stations."), 65-67 (considering technical studies submitted by various parties, including satellite operators, and concluding that "it would be inappropriate to universally mandate" design features for UMFUS base station antenna systems—including dynamic beamforming and power control—absent "more credible support for the proposition that satellite systems will receive harmful interference from mmW mobile systems.").

V. CONCLUSION

Straight Path applauds the Commission's actions in the *Report and Order*, which will enable the United States to continue to its global leadership in wireless broadband communications. Straight Path urges the Commission to reject proposals by the satellite industry that would sidetrack the Commission's efforts to promote the development and deployment of 5G mobile broadband services.

Respectfully submitted,

/s/ Davidi Jonas

Davidi Jonas, President and CEO
Jerry Pi, Chief Technology Officer

STRAIGHT PATH COMMUNICATIONS INC.
600 Sylvan Ave. Suite 402
Englewood Cliffs, NJ 07632

CERTIFICATE OF SERVICE

I, Gregory B. Simon, hereby certify that on January 31, 2017, a copy of the foregoing Opposition of Straight Path Communications Inc. to Petitions for Reconsideration was served by first-class mail, postage paid, on each of the following:

Audrey L. Allison
Senior Director, Frequency Management
Services
THE BOEING COMPANY
929 Long Bridge Drive
Arlington, VA 22202

Bruce A. Olcott
Preston N. Thomas
JONES DAY
51 Louisiana Ave. NW
Washington, D.C. 20001

Giselle Creeser
Director, Regulatory
M. Ethan Lucarelli
Director, Regulatory and Public Policy
INMARSAT, INC.
1101 Connecticut Ave. N.W.
Suite 1200
Washington, D.C. 20036

Jennifer A. Manner
Vice President, Regulatory Affairs
Jodi Goldberg
Associate Corporate Counsel
Brennan Price
Senior Principal Regulatory Engineer
ECHOSTAR SATELLITE OPERATING
CORPORATION
HUGHES NETWORK SYSTEMS, LLC
11717 Exploration Lane
Germantown, MD 20876

Christopher Murphy
Associate General Counsel,
Regulatory Affairs
VIASAT, INC.
6155 El Camino Real
Carlsbad, CA 92009

John P. Janka
Elizabeth R. Park
LATHAM & WATKINS LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, DC 20004

Tom Stroup
President
SATELLITE INDUSTRY ASSOCIATION
1200 18th Street N.W., Suite 1001
Washington, D.C. 20036

Petra Vorwig
Senior Legal and Regulatory
Counsel
SES AMERICOM, INC.
1129 20th Street, NW
Suite 1000
Washington, DC 20036

Suzanne Malloy
Vice President, Regulatory Affairs
O3B LIMITED
900 17th Street, NW
Suite 300
Washington, DC 20006

/s/ Gregory B. Simon

Gregory B. Simon